

[ CLAIMS ]

What is claimed is:

1. A liquid crystal display comprising:  
a first substrate having a first electrode;  
a second substrate having a second electrode corresponding to a pixel;  
liquid crystal having negative dielectric anisotropy sealed between the first and the second substrates; and  
a structure which is provided on at least the first substrate to control an alignment of the liquid crystal;  
wherein the structure on the first substrate has a linear protrusion structure, an auxiliary protrusion structure extending from the protrusion structure and opposing to each of facing end portions of the second electrode, and a width of the auxiliary protrusion structure wider than a width of the protrusion structure.
  
2. A liquid crystal display comprising:  
a first substrate having a first electrode;  
a second substrate having a second electrode corresponding to a pixel;  
liquid crystal having negative dielectric anisotropy sealed between the first and the second substrates; and  
a structure arranged on at least the first substrate to control an alignment of the liquid crystal;  
wherein the structure on the first substrate has a linear protrusion structure arranged diagonally to the pixel, and at least a part of end portions of the second electrode being in the area decided by the protrusion structure and the structure on the second substrate and forming an obtuse

angle with the protrusion structure extends outside.

3. A liquid crystal display in the claim 2 opposing to an extending portion of the second electrode and comprising the auxiliary protrusion structure extending from the protrusion structure.

4. A liquid crystal display in claim 2 wherein the extending portion of the second electrode has a portion overlapping wirings formed on the second substrate via an insulating film.

5. A liquid crystal display comprising:

a CF substrate forming a color filter;  
a TFT substrate forming a pixel electrode in each pixel;  
liquid crystal having negative dielectric anisotropy sealed between the CF substrate and the TFT substrate; and  
a structure provided on at least the CF substrate to control an alignment of the liquid crystal;  
wherein the structure on the CF substrate has a linear protrusion structure and an auxiliary protrusion structure extending from the protrusion structure and opposing to facing end portions of the pixel electrode; and the auxiliary protrusion structure is formed on a planarized area where no level difference occurs by the color filter.

6. A liquid crystal display comprising:

a CF substrate forming a color filter;  
a TFT substrate forming a pixel electrode in each pixel;  
liquid crystal having negative dielectric anisotropy sealed between the CF substrate and the TFT substrates; and  
a structure provided on at least the CF substrate to

control an alignment of the liquid crystal;

wherein the structure on the CF substrate has a linear protrusion structure which does not remain cleaning liquid in a cleaning of the CF substrate.

7. A method of fabricating a liquid crystal display comprising:

forming a pillar-shaped spacer to obtain a predetermined cell gap between a CF substrate and a opposing substrate on the CF substrate forming a color filter;

forming a protrusion structure having a lower height than the pillar-shaped spacer on the CF substrate and controlling an alignment of liquid crystal;

laminating the CF substrate and the TFT substrate forming the pixel electrode in each pixel; and

sealing liquid crystal having negative dielectric anisotropy between the CF substrate and the TFT substrate;

wherein the pillar-shaped spacer and the protrusion structure are simultaneously formed.

8. A liquid crystal display comprising:

a CF substrate forming a color filter;

a TFT substrate forming a pixel electrode in each pixel;

liquid crystal having negative dielectric anisotropy sealed between the CF substrate and the TFT substrate; and

a structure provided to at least the CF substrate to control an alignment of the liquid crystal;

wherein the structure on the CF substrate has an insulating layer embedded in a groove formed in the color filter.

9. A liquid crystal display comprising:

a CF substrate forming a color filter;  
a TFT substrate forming a pixel electrode in each pixel;  
liquid crystal having negative dielectric anisotropy  
sealed between the CF substrate and the TFT substrate;  
a structure provided to at least the TFT substrate to  
control an alignment of the liquid crystal; and  
a storage capacitor wiring arranged under the structure  
on a side of the TFT substrate via an insulation film;  
wherein a storage capacitor is formed by the storage  
capacitor wiring, the insulation film and the pixel  
electrode.